1 - 120

IFW AF/1741 $

CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8) Applicant(s): Seiji Yamashita	Docket No. P 00572.006

Serial No.	Filing Date	Examiner	Group Art Unit
09/507,212	2-18-2000	Tran, T.	1741

Invention: METHOD AND APPARATUS FOR REDUCING CONTAMINATION IN A PLASTIC CONTAINER

I hereby certify that this **Appeal Brief, $165 check, and return postcard**
(Identify type of correspondence)
is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **April 27, 2004**
(Date)

Diane Thomas
(Typed or Printed Name of Person Mailing Correspondence)

Diane Thomas
(Signature of Person Mailing Correspondence)

Note: Each paper must have its own certificate of mailing.

TRANSMITTAL OF APPEAL BRIEF (Small Entity)	Docket No. P 00 572.006

In Re Application Of: **Seiji Yamashita**

Serial No.	Filing Date	Examiner	Group Art Unit
09/507,212	2-18-2000	Tran, T.	1741

Invention: **METHOD AND APPARATUS FOR REDUCING CONTAMINATION IN A PLASTIC CONTAINER**

TO THE COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

Applicant is a small entity under 37 CFR 1.9 and 1.27.

A verified statement of small entity status under 37 CFR 1.27:

- ☐ is enclosed.
- ☐ has already been filed in this application.

The fee for filing this Appeal Brief is: **$165.00**

- ☒ A check in the amount of the fee is enclosed.
- ☐ The Director has already been authorized to charge fees in this application to a Deposit Account.
- ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. **02-2451**

Signature

Dated: **April 27, 2004**

Garth Janke, Reg. No. 40,662
BIRDWELL & JANKE, LLP
1100 SW Sixth Avenue, Suite 1400
Portland, Oregon 97204

I certify that this document and fee is being deposited on **4-27-2004** with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signature of Person Mailing Correspondence

Diane Thomas

Typed or Printed Name of Person Mailing Correspondence

cc:

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT EXAMINING OPERATIONS

Applicant:	Seiji Yamashita	Group Art Unit:	1741
Serial No.:	09/507,212	Examiner:	Tran, T
Filed:	February 18, 2000	Docket No.:	P 00 572.006

Title: METHOD AND APPARATUS FOR REDUCING CONTAMINATION IN A PLASTIC CONTAINER

MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this 27th day of April 2004.

Diane Thomas

Diane Thomas

Birdwell & Durando, LLP
1100 SW Sixth Avenue, Suite 1400
Portland, OR 97204

April 27, 2004

APPEAL BRIEF

Mail Stop: Appeal Brief - Patents
Board of Patent Appeals and Interferences
PO Box 1450
Alexandria VA 22313-1450

Greetings:

This Appeal Brief is being filed in connection with the final rejection of the above-captioned patent application, mailed January 10, 2003.

The real party in interest is Seiji Yamashita, an individual.

There are no related appeals or interferences.

STATUS OF CLAIMS

This appeal is from the final rejection of claims 10 - 13, 26, and 27.

GROUPING OF CLAIMS

The claims stand or fall together for purposes of this appeal only.

STATUS OF AMENDMENTS

An Amendment filed January 2, 2004 was entered as indicated in a paper (un-numbered) mailed January 27, 2004. Applicant has cancelled no claims in response to the restriction requirement and continues to traverse the restriction requirement.

SUMMARY OF INVENTION

The invention of claim 10 reads on the specification and drawings as follows:

10. An apparatus for reducing contamination of an article, comprising a plastic container adapted for holding the article (12 in Fig. 1; Page 3, line 11 - Page 4, line 2), and a coating (22 in Fig. 2; Page 4, lines 3 - 10) on selected portions of said container (Page 4, lines 3 - 4), said coating consisting essentially of titanium dioxide (Page 4, lines 11 - 15) such that the titanium dioxide is not substantially prevented from attracting atmospheric water molecules for loosening particle contamination (see functions of titanium dioxide coating at Page 4, lines 11 - 21), for facilitating cleaning the container to prevent contamination of the article when the article is stored in the

container, the apparatus further comprising at least one semiconductor wafer disposed in the container (Page 3, lines 9 - 10; 16 in Figure 1).

The invention of claim 11 reads on the specification and drawings as follows:

11. The apparatus of claim 10, wherein said container includes a closeable lid (20 in Figure 1; Page 3, line 16) for substantially sealing the interior of the container from the external atmosphere.

The invention of claim 12 reads on the specification and drawings as follows:

12. The apparatus of claim 11, wherein said container includes polypropylene (Page 3, lines 17 - 18).

The invention of claim 13 reads on the specification and drawings as follows:

13. The apparatus of claim 11, wherein said container includes polycarbonate (Page 3, lines 17 - 18).

The invention of claim 26 reads on the specification and drawings as follows:

26. The apparatus of claim 10, wherein said selected portions are interior surfaces of the container (Page 4, lines 7 - 9).

The invention of claim 27 reads on the specification and drawings as follows:

27. The apparatus of claim 10,[1] wherein said coating is provided in the form of a gel (Page 5, lines 14 - 21).

ISSUES

ISSUE 1

Whether Taoda et al. (U.S. Patent No. 5,562,820) (hereinafter "Taoda") in view of Nyseth (U.S. Patent No. 5,575,394) (hereinafter "Nyseth") teaches the claimed container with the claimed coating and comprising at least one semiconductor wafer as alleged in the final Office Action mailed December 2, 2003.

ISSUE 2

Whether Goto et al. (U.S. Patent No. 6,235,358) (hereinafter "Goto") in view of Nyseth teaches the claimed container with the claimed coating and comprising at least one semiconductor wafer as alleged in the final Office Action mailed December 2, 2003.

---

[1] There is a typographical error in claim 27 as indicated. The claim will be amended to correct this error should the case be allowed.

ARGUMENT

Brief Description of the Teachings of the References

Taoda

Taoda discloses a vessel for use in waste-water treatment. The vessel may be closed, with or without a lid, or may be in the form of a tube. Col. 3, lines 39 - 40. The inner sides of the vessel are coated with a titanium dioxide film. Col. 3, lines 35 - 36. The waste water to be treated is put into the vessel, iron salt is added, the waste water is then irradiated with light to decompose organic materials contained in the waste water. Col. 4, lines 36 - 45.

Nyseth

Nyseth discloses a semiconductor wafer storing and shipping container.

Goto

Goto discloses a package container having a coating that includes titanium dioxide. The titanium dioxide is used solely as a pigment. The coating includes "alicyclic epoxy resin" (See Col. 3, lines 35 - 40) which is "ultraviolet-curable" (See Col. 4, lines 40 - 47). The titanium dioxide in the resin is used to color the coating. The resin is hardened by exposure to UV light and thus forms a protective coating on the package.

1. ISSUE 1

Whether Taoda in view of Nyseth teaches the claimed container with the claimed coating and comprising at least one semiconductor wafer as alleged in the final Office Action mailed December 2, 2003.

A. Errors in the Rejections: No Motivation to Combine Taoda and Nyseth

By Amendment (mail date July 23, 2003), the claims expressly recite that the container is used for storing at least one semiconductor wafer. Nyseth discloses a container for storing semiconductor wafers, however, it has no special coating such as the coating claimed. Therefore, the entire teaching to modify Nyseth as claimed is being alleged to be contained in Taoda.

Taoda, pertains to waste water treatment. Taoda discloses, in addition to passing the waste water through a vessel coated with titanium dioxide, adding iron salt to the waste water and then irradiating the waste water with light to decompose and oxidize organic molecules in the waste water.

1. Combination is Improper Under MPEP 2143.01 as Rendering Prior Art Unsatisfactory for Intended Purpose

The Board is respectfully requested to take judicial notice of the fact that semiconductor wafers are not stored in water and iron salts are not applied thereto. In fact, Nyseth teaches that it is an object in the use of containers for storing semiconductor wafers to "minimize likelihood of contamination of . . .[the] wafers with particulate, moisture, or other contaminating mediums.

Therefore, Nyseth teaches expressly against using the method disclosed in Taoda, because if the method disclosed in Taoda were used, it would introduce substantial quantities of contamination (iron salts) and moisture (waste water).

According to MPEP 2143.01, a proposed modification cannot render the prior art unsatisfactory for its intended purpose (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). Since the method of Taoda applied to Nyseth would render Nyseth unsatisfactory for minimizing particulate contamination and moisture, the rejection is not proper.

2. Combination is Improper Under MPEP 2143.01 Because Taoda and Nyseth Do Not Suggest the Desirability of the Claimed Invention

Further, MPEP 2143.01 requires that the prior art suggest the desirability of the claimed invention (citing *in re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998)). There is no recognition in the prior art of record that stored semiconductor wafers are contaminated with organic molecules. Therefore, the prior art fails to suggest the desirability of decomposing and oxidizing organic molecules inside a container for storing semiconductor wafers. In fact, this teaching is found only in Applicant's specification, and its use by the examiner to reject the claims is impermissible hindsight under MPEP 2145(X)(A) (citing *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971)).

3. Combination is Improper Under MPEP 2143.01 Because The Prior Art Provides No Reasonable Expectation of Success

Even if it had been known to be desirable to decompose organic molecules in containers used to store semiconductor wafers, there is no reason for assuming that the method of Taoda, which is disclosed to function in an environment of running water and to require the addition of iron salts, would work in an environment of stagnant air in which contaminants such as iron salts are intentionally kept to a minimum. The examiner would need to at least produce a *prima facie* reason why a person of ordinary skill would have recognized that the difference in environments would not

be relevant to the function of the titanium dioxide as part of the *prima facie* case. In fact, it appears that such an assertion would be *prima facie* unreasonable, especially since the method of Taoda appears to depend on the addition of iron salts which is an impossible condition in storing semiconductor wafers.

The rejections based on Taoda and Nyseth are in error for all of the above reasons, any one of which by itself is sufficient to effectively rebut the examiner's position.

2. ISSUE 2

Whether Goto in view of Nyseth teaches the claimed container with the claimed coating and comprising at least one semiconductor wafer as alleged in the final Office Action mailed December 2, 2003.

A. Errors in the Rejections: Goto Does Not Disclose the Claimed Coating

Goto does not disclose the claimed coating. Applicant has proven beyond all requirements of the law that Goto does not disclose the claimed coating, as can be seen from the detailed discussion to follow. Particularly, Goto discloses titanium dioxide bound up in an epoxy resin. Applicant has produced an Expert's Declaration stating what is readily apparent--that the epoxy resin would defeat the function of the titanium dioxide that is recited in the claims. It was error to maintain the rejections based on Goto in the face of Applicant's proof.

1. It Was Error for the Examiner to Dismiss Applicant's Expert Declaration as Being Merely an Opinion

Epoxy resin is quite common in everyday experience, as glue, and it is well known to be waterproof. Accordingly, Applicant submits that it is readily apparent that this epoxy resin in would impermeably coat the titanium dioxide so that it could not come into contact with water molecules in the atmosphere as recited in the claims. However, when the examiner asserted to the contrary, Applicant produced the Declaration of an expert in the field of polymer chemistry stating the same conclusion. The examiner dismissed the Declaration out of hand as merely stating an opinion and gave it no weight.

However, Applicant's Declaration is factual evidence, precisely analogous to the evidence described in *In re Alton*, 76 F.3d 1168, 37 USPQ2d 1578 (Fed. Cir. 1996):

> The examiner interpreted the Wall declaration as offering opinion evidence, rather than factual evidence . . . . [However, t]he . . . declaration's assertion that '[m]odifying the residue at position 81 would have no effect on [disulfide bridge formation] because neither [asparagine] nor lysine can participate in disulfide bridge formation' is a factual statement . . . ." Id. at 1174 (Fed. Cir. 1996) (copy of opinion attached as Exhibit A).

Similarly here, Applicant's expert makes a factual assertion about the effect of the epoxy resin on the ability of the titanium dioxide to attract atmospheric water vapor from the atmosphere.

The Federal Circuit *In re Alton* concluded:

"Consequently, the examiner's dismissal of the declaration on the grounds that '[l]ittle weight is given an opinion affidavit . . . .' was error." Id. at 1175.

These words from the Federal Circuit apply equally to the examiner's actions in this case.

2. There is No Requirement that Applicant Produce any Evidence at all

The examiner's disregard for Applicant's expert Declaration amounts to a *de facto* requirement that Applicant run experiments to prove the expert's conclusions, since that is the only other possibility. But in fact, there is no requirement that Applicant produce any evidence at all. Rather, the examiner has the burden to produce evidence to reject claims on a theory that additional ingredients or components disclosed in a reference formulation would not materially change that formulation's ability to function as claimed. *In re De Lajarte.* 143 USPQ 256 (CCPA 1964).

In *In re De Lajarte*, the claimed invention was a glass that was claimed to have a specific resistance to perforation. The prior art reference disclosed a similar glass formulation except that it included the additional ingredients charcoal and sulfur. The examiner placed the burden on the applicant to prove that the additional ingredients charcoal and sulfur in the prior art reference would prevent the glass from having the resistance to perforation that was claimed. This is exactly analogous to what the examiner has done here, i.e., placed the burden on Applicant to prove that the epoxy resin in Goto would prevent the titanium dioxide from attracting atmospheric water vapor as claimed.

The Federal Circuit over-ruled the Patent Office. The Federal Circuit particularly rebuked the Patent Office for implying that the applicant had the burden to duplicate the material in the reference and evaluate its ability to resist perforation as claimed. The requirement that is being *de facto* placed on the Applicant here to run experiments duplicating the material in Goto (because no expert opinion can be given any weight) clearly runs afoul of the law. The Federal Circuit concluded:

> "In the total absence of evidence in the record to indicate that the amber glass disclosed in Lyle would be expected to have . . . [certain properties pertinent to the question of patentability], we can find no justification for placing the burden on applicant to conduct experiments to determine the . . . properties of the colored glass disclosed by Lyle.

Here, exactly as in *In re De Lajarte*, there is a total absence of evidence in the record to indicate that the epoxy resin in Goto would not materially affect the invention, so there is no justification for placing any burden on Applicant to conduct experiments.

To reiterate, *In re De Lajarte* refers to the evidence that *an examiner* must provide before claims can be rejected in the first place. The applicant in *In re De Lajarte* did not produce any evidence. Accordingly, even if Applicant submitted no evidence whatsoever, the examiner could not reject the claims on the asserted basis.

3. The Examiner Did Not Properly Consider Applicant's Evidence

In view of *In re De Lajarte*, it is unnecessary to consider how the examiner should treat or consider Applicant's evidence since Applicant was never under any obligation to produce evidence in the first place. Notwithstanding, it was a separate error that the examiner did not properly consider Applicant's evidence.

a. Evidence Was Not Weighed As Required by MPEP 716.01(d)

MPEP 716.01(d) ("Weighing Objective Evidence") requires that evidence must be *weighed* by the examiner, not simply dismissed out of hand. The word "weigh" literally implies that all of the evidence in favor of a proposition must be balanced against all of the evidence contrary to the proposition.

In this case there is only one piece of evidence--Applicant's expert Declaration. There is precisely zero evidence to the contrary. That is, while the examiner has disputed Applicant's evidence, she has merely given her opinion. She has not presented an affidavit or declaration under 37 CFR 1.132 as an expert, nor has she identified any other factual evidence.

Accordingly, any weighing of Applicant's evidence against the evidence to the contrary necessarily resolves in favor of Applicant, because there is no evidence to the contrary.

b. Factors Required For Weighing Evidence Were Not Considered

MPEP 716.02(c) states:

> "In assessing the probative value of an expert opinion, the examiner must consider [a] the nature of the matter sought to be established, [b] the strength of any opposing evidence, [c] the interest of the expert in the outcome of the case, and [d] the presence or absence of factual support for the expert's opinion." MPEP 716.01(d).

Taking these factors (a - d) in turn:

a. The nature of the matter sought to be established is purely technical, and Applicant's expert's technical credentials[2] in this area establish his expertise beyond any reasonable doubt.

b. There is no opposing evidence.

---

[2] A copy of the expert's Declaration is attached hereto, showing a selected sub-set of the expert's extensive technical credentials.

c. The expert is a tenured professor of Chemistry at a state University and has no connection whatsoever to, or interest in, the outcome of this case.

d. The opinion is based on the expert's assertions about chemical facts, e.g., the quantitative amount of water vapor that would be absorbed by the epoxy resin and the amount of the water vapor that is absorbed that would come into contact with the titanium dioxide molecules.

All of the factors weigh completely in favor of the probative value of Applicant's Declaration. Not one factor supports the examiner's contention that the Declaration has no probative value.

4. Summary of Errors in the Treatment of Applicant's Declaration

a. Under *In re Alton*, it was incorrect for the examiner to treat Applicant's Declaration as mere "opinion."

b. Under *In re De Lajarte*, it was incorrect for the examiner to require that Applicant run experiments to prove that the epoxy resin in Goto would prevent the claimed coating from functioning as claimed.

c. The examiner did not weigh Applicant's evidence as required by MPEP 716.01(d). Since Applicant's Declaration is uncontested, weighing the evidence necessarily resolves in favor of Applicant.

d. The examiner did not analyze the probative value of Applicant's evidence in light of the factors listed in MPEP 716.01(c). If such an analysis is performed, the only reasonable conclusion is that Applicant's Declaration has high probative value.

B. Error in the Rejections: No Motivation to Combine Goto and Nyseth

It is an additional error in the rejections, independent of the errors discussed above, to base them on a combination of Goto and Nyseth, even assuming that Goto discloses the claimed coating, which it does not.

Goto discloses titanium dioxide as a pigment for coloring packaging. But neither Goto nor Nyseth disclose any reason for coloring a container for storing semiconductor wafers. MPEP 2143.01 states that it is not enough, for obviousness, that a modification can be made[3]--the prior art must suggest the desirability of the modification. There is nothing in the record to show that it was known in the art to be desirable to color containers used for storing semiconductor wafers.

SUMMARY OF REASONS WHY THE CLAIMS ARE UNOBVIOUS

The claims are unobvious at least because the claimed titanium dioxide coating, having the particular property claimed, is provided on a container comprising at least one semiconductor wafer disposed therein which is, therefore, a container used for storing semiconductor wafers.

Nyseth discloses a container for storing semiconductor wafers, but discloses no coating. Goto and Taoda disclose coatings but not a container for storing semiconductor wafers.

Goto discloses a coating but not the claimed coating. Taoda discloses the claimed coating but only in combination with contaminants like iron salts and water that would be harmful to the claimed semiconductor wafer.

---

[3] "Fact that References Can be Combined or Modified is Not Sufficient to Establish *Prima Facie* Obviousness."

There is no teaching or suggestion to combine Taoda and Nyseth, and there is no teaching or suggestion to combine Goto and Nyseth even if Goto were pertinent, which it is not.

For all of the reasons presented above, the Board is respectfully requested to reverse the rejections and direct the Examiner to pass this case to issue.

Respectfully, submitted

Garth Janke
Reg. No. 40,662

APPENDIX

10. An apparatus for reducing contamination of an article, comprising a plastic container adapted for holding the article, and a coating on selected portions of said container, said coating consisting essentially of titanium dioxide such that the titanium dioxide is not substantially prevented from attracting atmospheric water molecules for loosening particle contamination, for facilitating cleaning the container to prevent contamination of the article when the article is stored in the container, the apparatus further comprising at least one semiconductor wafer disposed in the container.

11. The apparatus of claim 10, wherein said container includes a closeable lid for substantially sealing the interior of the container from the external atmosphere.

12. The apparatus of claim 11, wherein said container includes polypropylene.

13. The apparatus of claim 11, wherein said container includes polycarbonate.

26. The apparatus of claim 10, wherein said selected portions are interior surfaces of the container.

27. The apparatus of claim 10, wherein said coating is provided in the form of a gel.[4]

[4] There is a typographical error in claim 27 as indicated. The claim will be amended to correct this error should the case be allowed.